

ABSTRACT

An induction tool includes a conductive mandrel; at least one array including a transmitter, a bucking coil, and a receiver disposed in an insulating tool body surrounding the conductive mandrel; and an electrode disposed on the insulating tool body at a selected location between the bucking coil and the receiver, wherein the selected location is spaced from the transmitter at a distance corresponding approximately to the harmonic mean of the distance between the transmitter and the bucking coil and the distance between the transmitter and the receiver, and wherein the electrode includes a contact forming a conductive path to the conductive mandrel. Additional electrodes may be disposed above and below each transmitter and receiver coil to reduce sensitivity to eccentricity of the tool in the borehole.